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ABSTRACT

In school, writing may be emphasized across the curriculum. There is a plethora of kinds of written work for students to be engaged in when studying science lessons and units. Poetry writing may be an excellent way for students to reveal what has been learned in a science unit. Many good poems dealing with science information are collected in anthologies for teachers to use. The teacher needs to read aloud to students selected science subject matter poems and encourage these learners to write poems for ongoing units and for personal enjoyment. Poetry chosen for oral reading needs to be on the developmental level of learners, and it needs to capture their interest. A bulletin board with illustrations and related poetry will stimulate interest in the writing of poetry dealing with science. Several examples of poems--couplets, quatrains, limericks, and haiku--serve to show how students can write rhymed verse with a scientific theme. In writing poetry, the teacher should follow guidelines and principles of learning. (NKA)

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Writing Poetry in Ongoing Science Units of Study.

by Marlow Ediger

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WRITING POETRY IN ONGOING SCIENCE UNITS OF STUDY

Written communication is important in school and in society. Everyday, individuals engage in written communication. In school, writing may be emphasized across the curriculum. Science units of study can stress a quality writing program, integrated with what students are studying in science. There are a plethora of kinds of written work for students to be engaged in when studying science lessons and units. Creative writing of poetry can be of great interest to many students with quality ways of motivating learners in wanting to write. Poetry writing may be an excellent way for students to reveal what has been learned in a science unit. Students differ from each other in intelligences possessed (Gardner, 1993). One, among many, might relate to creative intelligence. However, creativity in school and in society is very important for all. To be a good problem solver, which all need to be, requires the ability to seek novel solutions to problematic situations. Rarely, does a single procedure work in solving a problem. New approaches and ways are needed in the solution process. Certainly, the creative writing of poetry can assist each learner to become increasingly proficient in the problem solving arena. Then too, poetry may be written and enjoyed for its very own sake. The writer has known individuals who have written many poems for personal enjoyment which have never been sent in for publication. Others have had poems published in less well known journals as well as once in a while, the individual has succeeded in having a poem published in a major publication. Science topics and knowledge provide an excellent source for the writing of poetry (See Ediger, 2000, 20-29).

Many good poems dealing with science information are written in anthologies for teachers to use in teaching students. The teacher needs to read aloud selected science subject matter poems to students and encourage these learners to write poems for ongoing units and for personal enjoyment.

Reading and Writing Science Poetry

Reading poetry aloud to students should be done with enthusiasm and personal enjoyment. Poetry chosen for oral reading needs to be on the developmental level of learners. It needs to capture the interests of students. a model is then provided for students to use in poetry writing. The science teacher stating with the kindergarten level may read to students a couple which is followed by learners writing couplets. The couplet is the easiest form of rhymed verse for learners to write. Students need to see couplets on the chalkboard, on an overhead, as well as on a computer monitor. After hearing couplets and participating actively in a discussion on what a couplet is, students should be ready to write their own. Adequate readiness on the part of the student needs

to be in evidence; hurrying with students writing couplets does not work for successful learning. A well developed bulletin board with illustrations and related poetry will stimulate interest in and the writing of poetry dealing with science. In a unit on "The Changing Surface of the Earth," a gifted primary grade student with teacher assistance wrote the following couplet, observed by the writer as a Supervisor of Student and Cooperation Teachers in the Public Schools (See Ediger, 1999, 7-15):

Erosion of the land
Hurts farm fields on the long hand.

Here, students have studied and put into poetry writing different kinds of erosion which wastes valuable top soil. Later, is sequence and with considerable knowledge about the science unit, 'the Changing Surface of the Earth," a student with the help of the teacher in the same classroom wrote the following triplet by adding a line to the above couplet, consisting of three lines with all ending words rhyming:

Erosion of the land
Hurts Farm fields on the long hand
Should it be banned?

In a science unit on "Simple Machines," two fourth grade students wrote the following quatrain, consisting of four lines of rhymed verse, cooperatively:

The axle and wheel
And a pulley of steel
Went up an inclined plane
To do much work loading a crane.

There are a variety of methods to use in developing background information within students in order to wrote poetry in ongoing science units. among others, these include discussions of slides, films, filmstrips, videos, illustrations, content from reading library books as well as the basal text, ideas from software packages, among others. The science teacher needs to use learning opportunities for student s to write poetry when science experiments and demonstrations are performed in a hands on approach in science units (Ediger, 1999, 46-55).

A fifth grade student wrote the following limerick with lines one, two, and five rhyming, as well as lines three and four also rhyming:

Fish breath air through the use of gills
Amphibians live in both water and on hills
They interact with the environment
And feed on plants and animals to feel content
While reptiles live in water, as well as on rocks and rills.

With learners having different learning styles (Dunn and Dunn, 1979), students may choose to work individually or cooperatively in writing poetry. Haiku is a form of verse which has no rhyme, but has five, seven, five syllables for each of three sequential lines. Two sixth graders cooperatively wrote the following haiku:

Birds fly in the air
Having feathers and light bones
They can soar and glide.

Writing haiku involves knowledge of subject matter as well as hearing and being able to write syllables. There are additional forms of poetry involving syllabication. A tanka has two additional lines, with a seven-seven sequence. Two lines may be added to the haiku or a new poem written such as in the following tanka:

Young mammals drink milk
Cats have hair on their bodies
They are true mammals
Cats, eat meat, are warm blooded
They raise a litter of young.

Thus, the tanka has the following number of syllables per sequential line -- five, seen, five, seven, seven.

Students who cannot hear rhyme or the number of syllables per word may enjoy writing free verse which is quite openended in style and length. A learner might then reveal what has been learned in a science lesson or unit with free verse such as in the following:

The eagle
can see well
soars down at high speed to catch prey
is on the endangered species list
lays eggs which hatch to provide young eaglets
has a sharp beak and talons on the claws
is classified as a bird among the invertebrates.

In writing poetry in science, the following guidelines should be followed by the teacher within an ongoing science lesson or unit of study:

1. students should choose the typic for writing. Being knowledgeable of the subject matter to be written is vital for success in learning.
2. students should be assessed based on what can be achieved

developmentally. Science subject matter needs to be inherent in each poem written. A variety of approaches should be used to apprise student achievement in science, including poems written

. 3. students should select the kind of poem to be written, but they should experience different kinds of rhyme, syllabication, or free verse. Individual differences need to be provided for among those learners who cannot hear rhyme nor syllabication.

4. the science teacher needs to provide models with quality teaching so that students may be stimulated to write poetry. He/she also needs to encourage, support, and assist students in poetry writing.

5. poetry written may be chosen as a part of the student's portfolio in the science curriculum (Ediger, 1999, Chapter Eight).

Principles of learning from educational psychology need to be followed by the science teacher in teaching and learning situations.

1. interesting poetry should be read to students to encourage learner reading and writing of poems.

2. meaningful poetry needs to be in the repertoire of the student. Thus, each learner should understand the meaning of poetry being pursued in reading and writing.

3. readiness for reading and writing poetry must be in the offing in order that each student may achieve, pursue, and accomplish. Adequate subject mater possessed by each learner needs to be present in order to be able to write effectively.

4. purpose needs to be felt in writing reading and writing poems. The science teacher may then state reasons, acceptable to the learner, in writing each kind of poetry.

5. individual differences among students need to be provided for. Leaners are on different levels of achievement in writing science verse. Each student may the work toward optimal achievement, beginning with the present achievement level.

6. individual and committee developed poems may be written to provide for different styles of learning possessed by students. When committees are used to write poems in science , the teacher needs to monitor carefully so that each student is contributing and does not depend only on others for the finished product. Working together harmoniously is important!

7. lifelong consumers and produces of poetry should definitely be an end result of teaching and learning in poetry.

8. growth in the mechanics of writing such as correct spelling of words, punctuation, quotation marks, direct address, among others, should be stressed to make communication more meaningful in the writing of science poetry.

9. challenge for achieving optimally should e stressed i ongoing lessons and units of study in science. The writing of poetry in these

periods of time should also stress optimal achievement of learners.

10. self evaluation of achievement needs to be emphasized so that students monitor their very own progress (Ediger, 2000, Chapter Seven).

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